

IN THE CLAIMS

Please amend the claims as follows:

1. (original) A recording medium comprising a storage layer for thermally-assisted writing of information to said recording medium, said storage layer comprising a stack including at least two sub-layers, wherein said sublayers are antiferromagnetically coupled through a non-magnetic layer, and wherein at least in a temperature range below the writing temperature the magnitude of the overall magnetization of the storage layer is substantially smaller than the magnitude of the magnetization of each of the sub-layers and said sublayers have an anisotropy favoring around room temperature an orientation of the magnetization perpendicular to the film plane.
2. (original) A recording medium according to claim 1, wherein said non-magnetic layer is a Ru layer.
3. (currently amended) A recording medium according to claim 1 or 2, wherein said non-magnetic layer has a thickness in between 0.5 and 1.5 nm.

4. (original) A recording medium according to claim 1 wherein said sub-layers consist of a rare-earth transition-metal alloy including at least Tb and Fe as elements.

5. (original) A recording medium according to claim 1, wherein said sublayers include a thin transition metal layer at the interface with the non-magnetic layer.

6. (currently amended) A recording medium according to any one of the preceding claimsclaim 1, wherein said sublayers are adapted to have different thicknesses.

7. (currently amended) A recording medium according to any one of the preceding claimsclaim 1, wherein said sublayers are adapted to have different Curie temperatures.

8. (currently amended) A recording medium according to any of the preceding claimsclaim 1, wherein the Kerr rotation or Kerr ellipticity of the recording stack has a larger magnitude for the antiparallel than for the parallel orientation of the sublayer magnetizations.

9. (currently amended) A recording medium according to ~~any one of~~ the preceding claims claim 1, wherein said double-layer structure is incorporated in an MSR stack.

10. (original) A recording medium according to claim 9, wherein said sublayers and non-magnetic layer are part of a DWDD stack and adapted in such a way that the magnitude of the magnetization of the storage layer as a whole at the readout temperature is substantially lower than the magnitude of the magnetization of each sublayer.

11. (original) A recording medium according to claim 9, wherein said recording medium is a MAMMOS recording medium.

12. (original) A method of manufacturing a magneto-optical recording medium, said method comprising the steps of:

- a. forming a storage layer by generating an antiferromagnetically coupled double-layer structure comprising two magnetic sub-layers of substantially the same composition and a non-magnetic coupling layer; and
- b. setting parameters of said magnetic sub-layers and the non-magnetic coupling layer of said double-layer structure, so as to obtain an antiparallel orientation of magnetization during

cooling down from the writing temperature for thermally-assisted recording.